
Intraparenchymal NR1 Stem Cell Therapy for Chronic Subcortical Ischemic Stroke

Grant Award Details

Intraparenchymal NR1 Stem Cell Therapy for Chronic Subcortical Ischemic Stroke

Grant Type: Late Stage Preclinical Projects

Grant Number: CLIN1-09433

Project Objective: To obtain an active IND to support a first in man study of NR1 cells in chronic ischemic stroke patients.

Investigator:

Name:	Gary Steinberg
Institution:	Stanford University
Type:	PI

Disease Focus: Stroke, Neurological Disorders

Human Stem Cell Use: Embryonic Stem Cell

Award Value: \$5,300,000

Status: Active

Grant Application Details

Application Title: Intraparenchymal NR1 Stem Cell Therapy for Chronic Subcortical Ischemic Stroke

Public Abstract:**Therapeutic Candidate or Device**

A human embryonic derived, non-genetically modified neural stem cell (NR1), originally derived from the Wi-Cell H-g line.

Indication

Patients with chronic motor deficits, from 6 months to 5 years after stroke. NR1 cells will be transplanted into the brain near the stroke.

Therapeutic Mechanism

The proposed therapeutic mechanism of action of NR1 neural stem cells is the secretion of factors that enhance the brain's own ability to heal itself after stroke, including the creation of new blood vessels to replace those that were injured beyond repair, and modulation the immune system.

Unmet Medical Need

Stroke is the leading cause of adult disability. There is no medical therapy that promotes stroke recovery, establishing this as a major unmet medical need. NR1 will be the first stem cell-derived therapy directed towards improving disability in this disease.

Project Objective

To prepare and submit an IND application.

Major Proposed Activities

- Completion of ongoing in vitro work.
- Animal selection for and carrying out GLP toxicology and biodistribution studies of the transplanted NR1 cells into the rodent brain.
- Pre-IND activities leading to submission of the IND.

Statement of Benefit to California:

This program provides several areas of benefit to California as the first stem cell-derived therapy for recovery of function after stroke. It will provide medical benefit by directly treating disabled Californians. It will provide economic benefit in a medical therapy that is manufactured and tested within the state. It will provide scientific benefit by pioneering the science of brain repair in California universities, with likely spin-off of additional novel therapies for neurological disease.

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